EPI-LOG

Communicable Disease and Epidemiology News

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West Nile Virus: Will 2006 be Our Year?

Washington State remains the *only* state in the US that has not detected a case of locally acquired human West Nile virus (WNV) infection. In 2005, two mosquito pools, one bird and one horse in Yakima County tested positive. These were the first positive WNV results since 1992, when four birds and two horses in six separate counties tested positive. It seems inevitable that eventually human cases will occur in Washington, and so we are dutifully reprinting our annual human WNV case identification and reporting guide for clinicians.

Clinical Presentation: The majority of WNV infections are mild or clinically inapparent. Approximately 20% of infected persons develop West Nile fever, which may include fever, malaise, anorexia, nausea, vomiting, eye pain, head-ache, body aches, skin rash, and swollen lymph glands. Approximately 1 in 150 infected persons develops severe neurological forms of disease, including encephalitis and meningitis. Neuroinvasive disease is associated with a range of neurologic and systemic manifestations including headache, high fever, gastrointestinal symptoms, neck stiffness, stupor, disorientation, cranial nerve abnormalities, ataxia, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death. The incubation period is thought to range from 3 to 14 days, with symptoms lasting 3 to 6 days, or longer.

Laboratory Diagnosis: The Washington State Public Health Laboratory (PHL) will only test King County patients who meet the following criteria, after consultation with Public Health-Seattle & King County:

- Patients with suspected WNV neuoroinvasive disease (fever and change in mental status, cerebrospinal fluid pleocytosis, or other acute central or peripheral neurologic dysfunction)
- Pregnant or breastfeeding women who are symptomatic with WNV infection
- Neonates or breastfeeding infants of infected mothers
- Recent blood, tissue, or organ donors or recipients suspected to have WNV infection
- Person with commercial laboratory evidence of WNV infection to confirm the diagnosis

The PHL tests for WNV-specific IgM antibody on serum or CSF by capture enzyme immunoassay (EIA) and Micro-sphere Immunoassay (MIA). This is the most sensitive test for WNV infection in immunocompetent patients, as more than 90% of those infected will have detectible serum IgM eight days after onset, and CSF antibody may be present even earlier. Positive specimens will be forwarded to the CDC for confirmatory testing. To evaluate immune deficient individuals, the PHL can do polymerase chain reaction (PCR) testing on CSF or blood, though **PCR testing is not recommended for routine diagnosis of WNV**.

Patients who don't meet the PHL WNV testing criteria can be tested by a commercial lab. Please note that because WNV cannot be distinguished from other causes of meningoencephalitis on clinical grounds, concurrent testing for other common causes of aseptic meningitis/encephalitis syndrome, (including cultures and/or PCR testing for enteroviruses and herpes viruses) is encouraged.

What Should be Reported as Suspect Arboviral Disease?

1) **Viral encephalitis** characterized by:
   a) Fever ≥38°C or 100°F and
   b) Central nervous system signs may include altered mental status (altered level of consciousness, confusion, agitation, or lethargy), coma, or other cortical signs (cranial nerve palsies; paresis or paralysis, or seizures), and
   c) Abnormal cerebrospinal fluid (CSF) profile suggestive of viral etiology (negative bacterial stain and culture, CSF pleocytosis and/or moderately elevated protein).
2) **Aseptic meningitis occurring from May through November in any patient ≥18 years of age**. Aseptic meningitis is characterized by:
   a) Fever ≥38°C or 100°F and
   b) Signs of meningeal inflammation (stiff neck, headache, photophobia) and
   c) Abnormal CSF profile suggestive of viral etiology.
3) **Acute flaccid paralysis or presumed Guillain-Barrè syndrome,** even in the absence of fever and other neurologic symptoms.
4) **Suspected West Nile virus infection** in:
   a) Patients with a history of recent blood donation or transfusion, or organ transplant recipients
   b) Patients with laboratory, occupational, transplacental, or breastfeeding associated exposures
   c) Pregnant women
5) **West Nile fever** in patients with positive commercial laboratory test results.

Report suspect, or commercial laboratory positive West Nile Virus cases within 3 work days to Public Health by calling (206) 296-4774, or by faxing a completed "Arborviral Encephalitis/Meningitis Case Report Form" to (206) 296-4803. Find the form at: www.metrokc.gov/health/westnile/forms.htm

Test Interpretation: IgM antibody develops by day 8, and IgG antibody within 3 weeks after illness onset. When indicated, convalescent serum specimens should be drawn about 3-4 weeks after acute specimens. Negative results on any specimen obtained <8 days after onset of illness should be considered inconclusive and a convalescent serum specimen, obtained at least 2 weeks after the first specimen, is needed to make a final determination. Cross-reactions may occur among patients who have had yellow fever, Japanese encephalitis vaccination, a previous history of arboviral encephalitis, or dengue fever.

For additional information on WNV, see the Public Health – Seattle & King County WNV web site: www.metrokc.gov/health/westnile/

New Interim Mumps Vaccination Recommendations

On May 17, 2006, the Advisory Committee on Immunization Practices (ACIP) met to reconsider mumps vaccine recommendations in light of the recent outbreak of mumps in the midwestern United States. Their recommendations, (with changes to their previous recommendations highlighted in bold), are as follows:

- Preschoolers and adults not at high risk for acquiring mumps infection should receive one dose of mumps containing vaccine. Combined MMR vaccine generally should be used whenever any of its component vaccines are indicated. For children aged 1 to 12 years, MMRV vaccine can be considered if varicella vaccine is indicated.
- Adults at high risk for acquiring mumps (i.e., persons who work in health-care facilities, international travelers, and students at post-high school educational institutions), and children in grades K through 12, should receive two doses of mumps containing vaccine.
- Unvaccinated persons with documentation of physician-diagnosed mumps, laboratory evidence of immunity, or who were born prior to 1957 can generally be considered immune to mumps.
- **Health-care facilities should consider recommending 1 dose of MMR vaccine to unvaccinated health-care workers born prior to 1957 who do not have documentation of physician-diagnosed mumps, or laboratory evidence of mumps immunity**.
- During a mumps outbreak, and depending on the epidemiology of the outbreak (e.g., the age groups and/or institutions involved), a second dose of vaccine should be considered for children aged 1 to 4 years, and adults, who have received only one dose of mumps containing vaccine. The second dose of vaccine can be administered as early as 28 days after the first dose.
- **In addition, during an outbreak, health-care facilities should strongly consider recommending 2 doses of MMR vaccine to unvaccinated workers born before 1957 who do not have documentation of physician-diagnosed mumps, or laboratory evidence of mumps immunity**.

For complete information, see the article: CDC. Multistate Outbreak of Mumps---United States, January 1--May 2, 2006. MMWR 2006;55(Dispatch):1-5. This article can be found online at: www.cdc.gov/mmwr/preview/mmwrhtml/mm55d518a1.htm

Avian Influenza Update

In May, seven members of an extended family in Indonesia were infected with avian influenza H5N1, six died. The World Health Organization investigated this cluster of cases and concluded that "All confirmed cases in the cluster can be directly linked to close and prolonged exposure to a patient during a phase of severe illness".

This cluster of apparent human-to-human transmission raised concerns about a potential change in the H5N1 virus allowing easier human-to-human spread. Sequencing of all eight gene segments found no evidence of genetic reassortment with human or pig influenza viruses and no evidence of mutations that might enhance its trans-missibility. Indonesia is currently the "hot spot" for human cases of avian influenza H5N1, with 31 human cases reported thus far in 2006, more than any other country.

An HHS checklist for pandemic planning at medical offices and clinics is available at: www.pandemicflu.gov/plan/medical.html

Disease Reporting

AIDS/HIV ..... (206) 296-4645
STDs..... (206) 731-3954
TB ..... (206) 731-4579
All Other Notifiable Communicable Diseases (24 hours a day) .... (206) 296-4774
Automated report line for conditions not immediately notifiable……..(206) 296-4782

Reported Cases of Selected Diseases, Seattle & King County 2006

	Cases Reported in April		Cases Reported Through April	
	2006	2005	2006	2005
Campylobacteriosis	15	19	67	84
Cryptosporidiosis	4	9	6	31
Chlamydial infections	374	419	1768	1929
Enterohemorrhagic *E. coli* (non-O157)	0	0	0	4
***E. coli* O157: H7**	1	3	4	5
Giardiasis	11	7	37	35
Gonorrhea	148	119	629	514
***Haemophilus influenzae* (cases <6 years of age)**	0	0	0	0
Hepatitis A	0	0	5	6
Hepatitis B (acute)	0	3	5	7
Hepatitis B (chronic)	90	62	281	191
Hepatitis C (acute)	0	1	3	3
Hepatitis C (chronic, confirmed/probable)	124	11	487	427
Hepatitis C (chronic, possible)	20	52	112	153
Herpes, genital (primary)	75	45	274	230
HIV and AIDS (includes only AIDS cases not previously reported as HIV)	29	28	100	127
Measles	0	0	0	0
Meningococcal Disease	1	2	4	10
Mumps	0	0	2	1
Pertussis	5	15	48	63
Rubella	0	0	0	1
Rubella, congenital	0	0	0	0
Salmonellosis	8	12	51	66
Shigellosis	7	9	11	22
Syphilis	23	8	81	59
Syphilis, congenital	0	0	0	0
Syphilis, late	17	5	26	30
Tuberculosis	10	9	28	36

The *Epi-Log* is available in alternate formats upon request.